5/30

DART AEROSPACE LTD	Work Order:	23767
Description: Label	Part Number:	D3309-1
<b>Dwg:</b> D3309 Rev. A	Qty:	Z5
		Page 1 of 1

Step	Location	Procedure	Ву	Date	Qty
1	DC	Issue Traveler	KA	05.07.06	
2	PG	Issue P/O: 2009336  Make as per Dwg D3309  Black letters (0.15" min. height) on white adhesive back  Possible Manufacture: From 3M 7 mil masking film # 8522CP or  Avery IPM # 2031  Possible Supplier: Studio Lettrage  Material release note is required	AR"	05/07/06	25
3	RG	Receive and Inspect for transit damage Enure material release note is attached	<b>1</b> 8	05/07/18	25
4	QC6	Inspect dimensions as per Dwg D3309	9	0508.03	25
5	ST	Identify and Stock	0c.	05/08/03	25
6	AC	Cost / part_6 . 76	SUE	05-68-68	25
7	DC	Close W/O 6 . 75 Inspect Level 21		0=/18/04	25

Rev	Date	Change	Revised By	Approved
Α	04.12.13	Naviania	KJ/RF	4



# **Dart Aerospace Ltd**

W/O: WORK ORDER CHANGES							
DATE	STEP	PROCEDURE CHANGE	Ву	Date	Qty	Approval Mfg / Design Mgr	Approval QC Inspector
						<u> </u>	

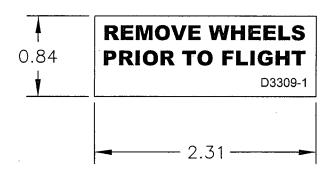
NCR:	WORK ORDER NON-CONFORMANCE (NCR)							
		Description of NC	Corrective Action Section B					
DATE	STEP	Section A	Initial Design Mgr	Action Description  Design Mgr	Sign & Date	Verification Section C	Approval Design Mgr	Approval QC Inspector
						,		
<u>.</u>								
		-						

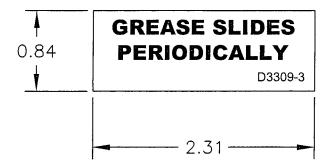
Part No:	PAR #:	Fault Category:N	NCR:	Yes No DQA:	Date: 05/08/04
NOTE: Date & initial all entries				QA: N/C Closed:	Date:



DE	SIGN 3	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
СН	ECKED	APPROYED	DRAWING NO. REV. A
	7	1/n/>·	D3309 SHEET 1 OF 1
DA	ΤE	<i>V</i> 4 1	TITLE SCALE
04	1.12.09		LABEL 1:1
A		04.12.09	NEW ISSUE







NOTES:

SHOP COPY

1) MATERIAL: BLACK LETTERS (0.15" MIN HEIGHT) ON ADHESIVE BACK RETURN TO MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP OR AVERY FOR \$\frac{100}{200} \text{C} \text{PM} \text{C} RET'URN TO

INCONTROLLED COPY

77

WOW 3 A iv. 23767

0

Copyright © 2004 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

### Job Costing Report

Dart Aerospace Ltd. Hawkesbury

Jul 06, 2005 11:42 am

Work Order No : 0023767 Department Code:

Project Name : D3309-1 Project For : WK530 Burden Flags : NNNNNNN WO Status : Open

Work Order Type : Main Main WO Number : Invoice State : Not Invoiced

Invoice Date : House Part Number : D3309-1 Invoice Number : Description : Label

Invoice Amount: 0.00 Manufactured : Yes

Amount Req'd: 25
Amount Done: 0
Start Date: 07-06-05 Order Entry No :

OE Value : 0.00

Est Finish Date : 07-30-05

Est Mark Up : 0.000% Actual Mark Up : 0.000% Act Finish Date : Actual Mark Up : Drawings Reqd : No

Ok for Approval : Approval Rec'd : \$0 Posted to Finished Goods

		Estimated	Actual	Var. %	Posted	To Post
Material Cost Engineering Hours	:	0.00 0.00 0.00	0.00	0.00	0.00	0.00
Engineering Cost Production Hours	:	0.00	0.00	0.00	0.00	0.00
Production Cost Packaging Hours	:	0.00	0.00	0.00	0.00	0.00
Packaging Cost OverHead Hours	:	0.00	0.00	0.00	0.00	0.00
OverHead Cost	:	0.00	0.00	0.00	0.00	0.00
CNC Hours	:	0.00	0.00	0.00	0.00	0.00
Misc. Hours Misc.	:	0.00 0.00	0.00	0.00	0.00	0.00
Burden	:	0.00	0.00	0.00		
Total Cost Mark up Selling Cost	:	0.00 0.000 0.000	0.00 0.000 0.000	0.00		

Estimated Actual 0.00 0.00 Labour Hrs/Amount Done : Profits/(Loss) : 0.00 0.00

### **Product Bulletin 8522**

**3M** 

Release F, Effective January 2003 Black bar in margin indicates a change

# Scotchcal <sup>™</sup> Opaque Imaging Media 8522

### **Description**

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

### Advantages

- Optimized for use with selected Epson Stylus Proprinters and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media
  - For opaque (reflective) graphics
  - Changeable, easy to remove from warranted substrates up to 1 year later
  - Dries quickly after printing so the overlaminate can be applied almost immediately
  - Low slippage paper liner for superior tiling
- Overlaminates:
  - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
  - Available in luster and matte gloss
  - Adhesive allows for heat-assisted or cold-temperature lamination

#### **Applications and Uses**

3M <sup>™</sup> Scotchcal <sup>™</sup> Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M <sup>™</sup> MCS <sup>™</sup> Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
  - Graphics for vans, personal vehicles, trucks and buses
  - Novelty posters
  - Retail and point-of-purchase displays
  - Information graphics such as maps and directories
  - Entertainment promotions in museums, zoos, parks, theatres, sports venues
  - Education and presentation graphics

- Legal and courtroom exhibits
- For flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications

### Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wallboard
- Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Waterbased chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication, Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

# **Compatible Products and Equipment**

### Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
  - Epson Archival Inks
- Epson Stylus Pro 10600 printer
  - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
  - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
  - HP83UV Color Ink System

#### Overlaminates (required)

- 3M<sup>™</sup> Luster Overlaminate 8519 (semi-gloss)
- 3M <sup>™</sup> Matte Overlaminate 8520

Note: For the full product names of the 3M products listed on this page, please see page 1.

## Warranted Substrates

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Imron® (polyurethane-painted metal panel)
- Sintra™ board

# Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates, 3M recommends that you test and approve the media for both adhesion and removal characteristics.

# Characteristics

Characteristic	Description
Media	7 mil, white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications (no corrugations)
Application temperature range	28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

# How to Become a 3M Ink Jet **Registered Fabricator**

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at www. scotchprint.com

# **Effective Performance Life**

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3. Also see the section, Removability.

### Warranted Durability

Media 8522	Epson Pr	inters	HP Printe	rs	
with Overlaminate 8519 or 8520	Outdoor	Indoor	Outdoor	Indoor	
Applied to Warranted Substrates	2 years	5 years	3 years	5 years	

# Removability

Imaging media 8522 is removable from warranted substrates for 1 year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

# **Fabrication**

Graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3.

See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

# **Graphic Construction Options**

# **Opaque (Reflective) Graphics**

Opaque graphics made with imaging media 8522 require an overlaminate and an opaque substrate.

Viewer/Light Source



Overlaminate 8519, 8520 Adhesive on bottom

Imaging Media 8522 Image on top; adhesive on bottom

Opaque Substrate

Note: For the full product names of the 3M products listed on this page, please see page 1.

# Shelf Life and Storage

- 3M™ Scotchcal™ Changeable Opaque Imaging Media 8522 has a shelf life of one year.
- Storage conditions (new and partially used rolls). For optimum performance, use the middle of these ranges:
  - Original packaging, including plastic wrap
  - Relative humidity of 20% to 80%
  - Temperature of 33° to 104°F (0° to 40°C)
  - Away from direct sunlight
- Do not stack unprotected rolls or lay sharp or heavy obiects on them.

### Health and Safety

### Caution

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at http://www.3M.com/msds.
- · By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

# **Warranty and Limited Remedies**

### 3M™ MCS™ Warranty for Graphics Produced on HP DesignJet Printers and Epson Stylus Pro Printers

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose: We warrant graphics produced by a 3M Ink Jet Registered Fabricator made with imaging media 8522, printed on an approved HP thermal ink jet printer according to HP's recommendations or Epson Stylus Pro printer according to Epson's recommendations, overlaminated with 8519 or 8520, and applied to a Warranted Substrate according to 3M's recommendations. These graphics are covered against failure caused by ultraviolet light, temperature extremes, pollution, and other elements.

If a graphic fails to perform in accordance with 3M product specifications within this time frame, 3M will replace the materials at no charge. These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor charges.

### 3M Related Literature

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at www.scotchprint.com, or order them via our Faxon-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768 International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M <sup>™</sup> Scotchcal <sup>™</sup> Overlaminate 8519 and 8520	8519/8520	4524
Instruction Bulletins		
Making thermal ink jet graphics	4.23	6523
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
Warranties		
Worldwide 3M™ MCS™ Warranty Packe (includes all Commercial Graphics MCS Wa	<b>t</b> rranties)	9503
Worldwide 3M™ MCS™ Warranty Overv		9504

3M, Scotchcal and MCS are trademarks of 3M. Epson and Stylus Pro are trademarks of Epson. HP and DesignJet are tradenames of Hewlett Packard. Sintra is a trademark of Swiss Aluminum Ltd. Imron is a registered trademark of DuPont in the United States

### **Bulletin Change Summary**

The Epson Stylus Pro Printers 9500, 10000 10600, and Epson Archival Inks have been added to this bulletin. Additional changes resulting from this addition are marked with black bars in the margin.

### **3**M

**Commercial Graphics Division** 

3M Center, Building 220-6W-06 PO Box 33220 St. Paul, MN 55133-3220 USA General Info. 1-800-374-6772 Technical Info. 1-800-328-3908 Fax 1-651-736-4233

Fax-on-Demand document: 4506

www.scotchprint.com

3M Canada P.O. Box 5757 London, Ontario Canada N6A 4T1 1-800-265-1840 Fax 519-452-6245

Fax-on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International

3M México, S.A. de C.V.

Av. Santa Fe No. 55 Col. Santa Fe, Del. Alvaro Obregón México, D.F. 01210 52-55-52-70-04-00 Fax 52-55-52-70-22-77

3M Puerto Rico, Inc.

Puerto Rico Industrial Park P.O. Box 100 Carolina, PR 00986-0100 787-620-3000 Fax 787-750-3035

©3M 2003. All rights reserved.

Product Bulletin 8522 - 3